

## ABSTRACT OF THE DISCLOSURE

An apparatus and a method for performing a protocol that optimizes a transmission power in a network. The apparatus and the method perform a protocol that optimizes the transmission power in the network for point-to-  
5 multipoint communication (1:N). The apparatus includes a communication unit for sending and receiving a data packet through the air, and a control unit that outputs a control signal for controlling the transmission power according to connection information of the data packet received through the communication unit. The connection information includes a reception signal  
10 strength and/or link quality information. Since the transmission power is adjustable, communication is carried out among nodes of the network with an adequately minimum power consumption and a proper communication quality.